

**10/664,040**  
**Notice of Allowability**

Application No.

10/664,040

Examiner

Lun-See Lao

Applicant(s)

THIGPEN, F. BRUCE

Art Unit

2615

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 07-11-2007.
2. ☒ The allowed claim(s) is/are 1, 2 and 4-15.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance             |
|  | 9. <input type="checkbox"/> Other _____   |

### DETAILED ACTION

1. This action responds to the amendment filed on 07-11-2007. Claims 1-2, 5-6 and 11-15 have been amended.

### *Examiner's Amendment*

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3. Authorization for this examiner's amendment was given in a telephone interview with Mr. Ralph A. Dowell on 09-24-2007.

4. The application have been amended as follows:

1. (currently amended) A sound system for providing reflected stereo audio to a listening position in a vehicle, comprising:

a. a first smooth surface oriented at an upwardly inclined angle toward the listening position;

b. a second surface positioned at an acute angle with respect to said first smooth surface forward of the listening position and facing said first smooth surface;

wherein said first smooth surface is a front windshield and the second surface is a portion of a front dashboard;

c. first and second planar magnetic transducers mounted to said second surface so as to be oriented toward said first smooth surface and wherein each of said first and

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second planar magnetic transducers includes a diaphragm having an elongated central axis;

d. an acoustic enclosure mounted beneath each of said first and second transducers and said second surface;

e. said first and second transducers being mounted relative to said second surface such that the elongated central axes of said diaphragms thereof are generally aligned and are oriented parallel to the listening position and with said first and second transducers being spaced

from each other so that sound from said first planar magnetic transducer is directed to one ear of a person seated at the listening position and sound from said second planar magnetic transducer is directed to another ear of the person seated at the listening position, whereby audio from the first and second transducers is reflected from the first smooth surface toward the listening position providing stereo imaging; and

f. an audio source connected to each of said first and second transducers.

2. (currently amended) An automotive sound system providing direct stereo audio to a listening position located in a vehicle seat, comprising:

~~a. a first interior surface tapered upwardly and facing the listening position;~~

a. a first interior surface incline upwardly at an angle facing toward the listening position;

a second interior surface positioned at an acute angle relative to said first interior surface forward of the listening position and facing said first interior surface;

wherein said first interior surface is a front windshield and said second interior surface is a portion of a front dashboard;

b. first and second planar magnetic transducers mounted relative to a second interior surface so as to direct audio sound there through toward said first interior surface and wherein each of said first and second planar magnetic transducers includes a diaphragm having an elongated central axis;

c. said first and second planar magnetic transducers being oriented such that the elongated central axes of said diaphragms thereof extend generally parallel to the listening position, said first and second planar magnetic transducers being spaced from one another in a general linear arrangement so that sound from said first planar magnetic transducer is directed to one ear of a person seated at the listening position and sound from said second planar magnetic transducer is directed to another ear of the person seated at the listening position, and wherein the audio sound from said first and second planar magnetic transducers is reflected from the first interior surface directly toward the fixed listening location providing stereo imaging; and

d. audio source electronics connected to said first and second planar magnetic transducers to create an audio stereo output.

Claim 4 (currently amended) The automotive sound system of claim 3, 2 wherein the vehicle seat is a vehicle front seat.

Please cancel claim 3

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***Allowable Subject Matter***

5. Claims 1-2 and 4-15 are allowed.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kurth (US PAT. 4,612,530) is cited to show other related Vehicle audio system with directional sound and reflected audio imaging for creating a personal sound stage.

7. Any response to this action should be mailed to:

Mail Stop \_\_\_\_ (explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:

**(571) 273-8300**

Hand-delivered responses should be brought to:

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao, Lun-See whose telephone number is (571) 272-7501. The examiner can normally be reached on Monday-Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian, can be reached on (571) 272-7848.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (571) 272-2600.

Lao, Lun-See *L.S.*  
Patent Examiner  
US Patent and Trademark Office  
Knox  
571-272-7501  
Date 09-24-2007

  
**URBAN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**